

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL030520\  
 Data File : VL034813.D  
 Acq On : 6 Mar 2020 3:27  
 Operator : SY/AP  
 Sample : L1698-08 10X  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SS-2-4

Manual Integrations  
 APPROVED

MMDadoda  
 3/9/2020 9:19:50 AM

Quant Time: Mar 06 09:12:29 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL030420AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Mar 0  
 QLast Update : Wed Mar 04 06:36:39 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 458631   | 10.00 | ppbv  | -0.02    |
| 33) 1,4-Difluorobenzene | 7.19  | 114  | 1117096  | 10.00 | ppbv  | -0.02    |
| 55) Chlorobenzene-d5    | 12.11 | 117  | 1111611  | 10.00 | ppbv  | -0.03    |

| System Monitoring Compounds |        | R.T.  | QIon     | Response | Conc | Units  | Dev(Min) |
|-----------------------------|--------|-------|----------|----------|------|--------|----------|
| 68) 1-Bromo-4-Fluorobenzene | 14.45  | 95    | 913724   | 9.86     | ppbv | -0.03  |          |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 98.60% |          |

| Target Compounds             | R.T.  | QIon | Response | Conc    | Units  | Ovalue |
|------------------------------|-------|------|----------|---------|--------|--------|
| 5) Vinyl Chloride            | 3.22  | 62   | 3047057  | 102.486 | ppbv   | 91     |
| 9) Propene                   | 2.97  | 41   | 675365   | 32.838  | ppbv   | 93     |
| 10) Heptane                  | 8.15  | 43   | 1337907  | 25.597  | ppbv   | 97     |
| 13) Ethanol                  | 3.58  | 45   | 59989    | 8.513   | ppbv   | 97     |
| 15) Acetone                  | 3.84  | 43   | 1570170  | 28.590  | ppbv # | 85     |
| 18) 1,1-Dichloroethene       | 4.27  | 96   | 64889    | 3.184   | ppbv   | 93     |
| 20) Methylene Chloride       | 4.32  | 84   | 318879   | 16.268  | ppbv   | 96     |
| 22) trans-1,2-Dichloroethene | 4.87  | 96   | 132280   | 6.649   | ppbv   | 96     |
| 26) Hexane                   | 5.69  | 57   | 1855903  | 44.763  | ppbv # | 42     |
| 27) Carbon Disulfide         | 4.53  | 76   | 61812    | 1.276   | ppbv   | 99     |
| 30) Cyclohexane              | 7.14  | 84   | 1383135  | 43.605  | ppbv   | 98     |
| 31) cis-1,2-Dichloroethene   | 5.55  | 61   | 8449874  | 198.702 | ppbv # | 66     |
| 34) 2-Butanone               | 5.25  | 43   | 134664   | 1.853   | ppbv   | 100    |
| 36) Benzene                  | 6.91  | 78   | 1622088  | 16.993  | ppbv   | 98     |
| 38) Trichloroethene          | 7.85  | 130  | 1623580  | 43.640  | ppbv   | 93     |
| 44) 2,2,4-Trimethylpentane   | 7.89  | 57   | 3108634  | 18.635  | ppbv # | 72     |
| 52) Tetrachloroethene        | 11.25 | 164  | 597935   | 16.955  | ppbv   | 95     |
| 53) Toluene                  | 9.83  | 91   | 526924   | 5.216   | ppbv   | 99     |
| 58) Ethyl Benzene            | 12.73 | 91   | 238362   | 1.740   | ppbv   | 98     |
| 59) m/p-Xylene               | 13.00 | 91   | 689394   | 5.814   | ppbv   | 95     |
| 60) o-Xylene                 | 13.72 | 91   | 187058   | 1.559   | ppbv   | 97     |
| 74) 1,2,4-Trimethylbenzene   | 16.79 | 105  | 37827m   | 0.272   | ppbv   |        |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

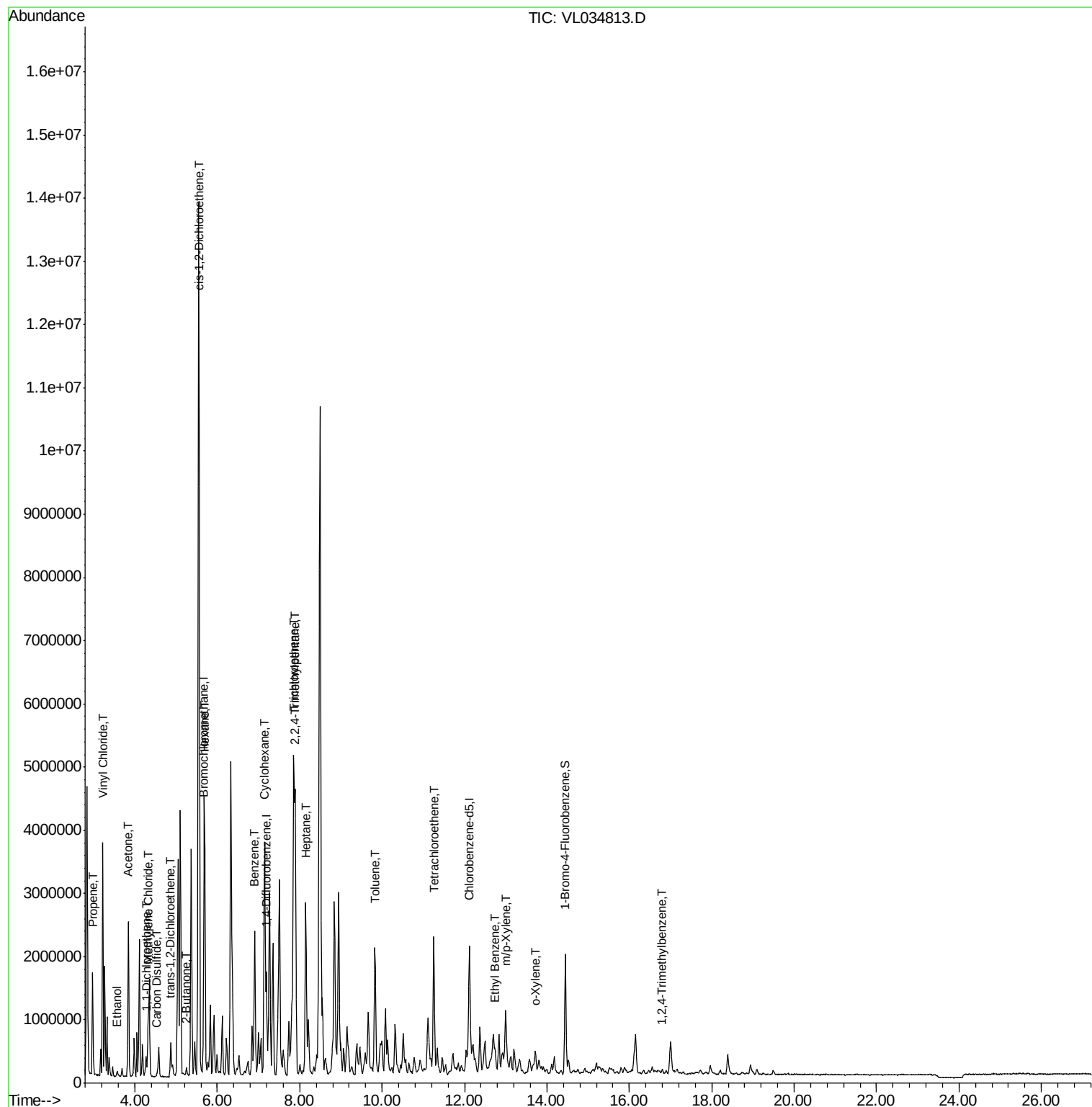
Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL030520\  
Data File : VL034813.D  
Acq On : 6 Mar 2020 3:27  
Operator : SY/AP  
Sample : L1698-08 10X  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

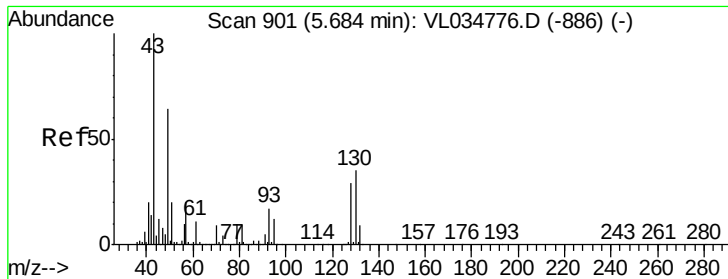
Instrument :  
MSVOA\_L  
ClientSampleId :  
SS-2-4

Manual Integrations  
APPROVED

MMDadoda  
3/9/2020 9:19:50 AM

Quant Time: Mar 06 09:12:29 2020  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL030420AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Mar  
QLast Update : Wed Mar 04 06:36:39 2020  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.02 min

Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

Instrument :

MSVOA\_L

ClientSampled :

SS-2-4

Tot Ion: 49 Resp: 458631

Ion Ratio Lower Upper

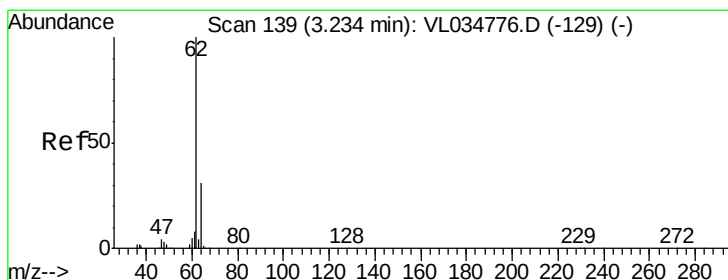
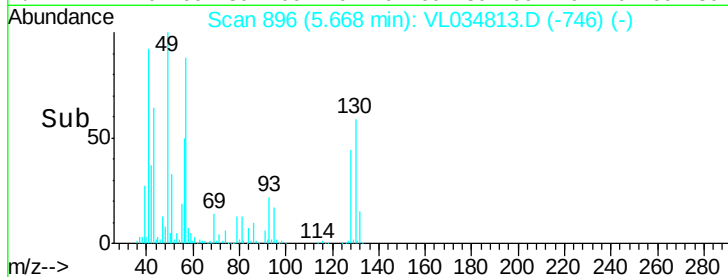
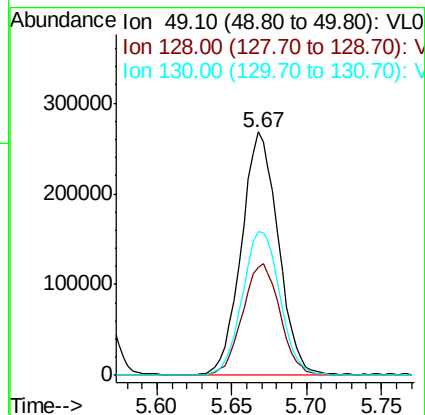
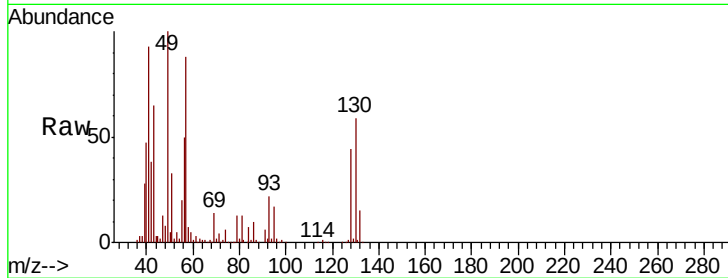
49 100

128 46.8 21.6 64.6

130 60.7 27.4 82.2

Manual Integrations  
APPROVED

MMDadoda  
3/9/2020 9:19:50 AM



#5

Vinyl Chloride

Concen: 102.486 ppbv

RT: 3.22 min Scan# 135

Delta R.T. -0.01 min

Lab File: VL034813.D

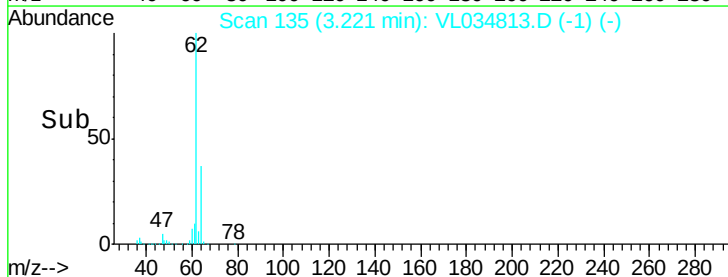
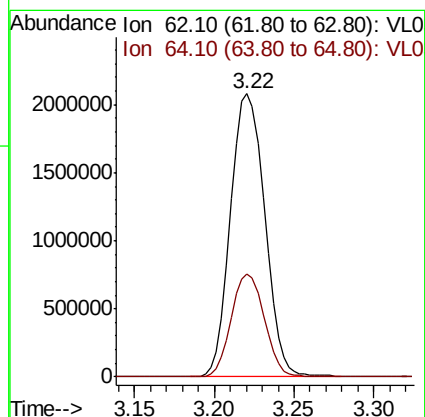
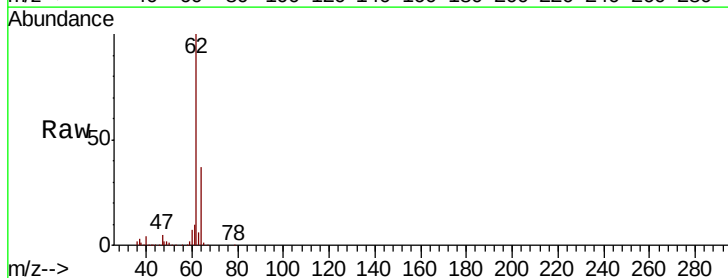
Acq: 6 Mar 2020 3:27

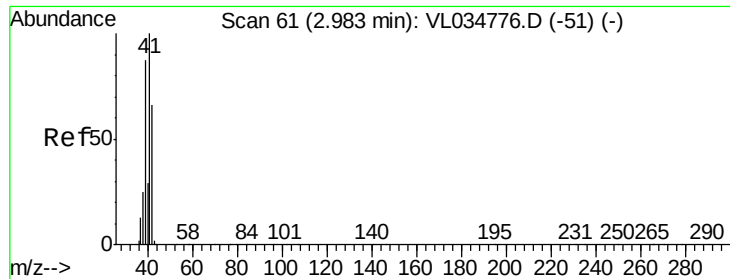
Tgt Ion: 62 Resp: 3047057

Ion Ratio Lower Upper

62 100

64 36.6 25.1 37.7





#9

Propene

Concen: 32.838 ppbv

RT: 2.97 min Scan# 58

Delta R.T. -0.01 min

Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

Instrument :

MSVOA\_L

ClientSampled :

SS-2-4

Tot Ion: 41 Resp: 675365

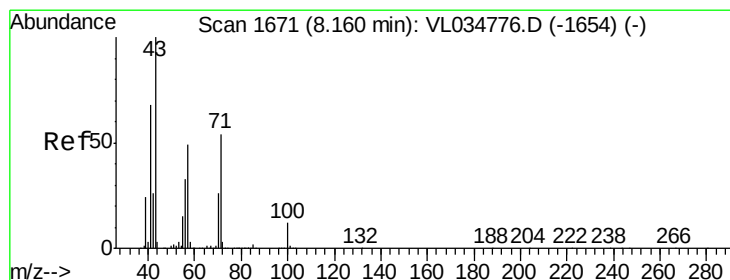
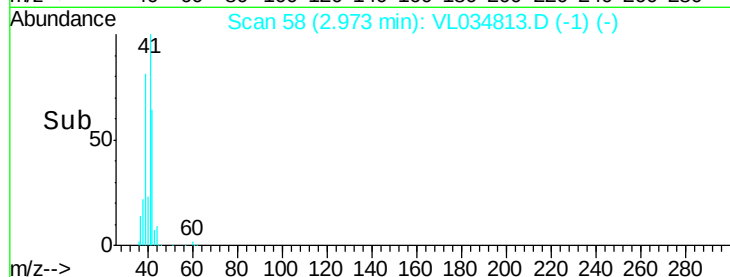
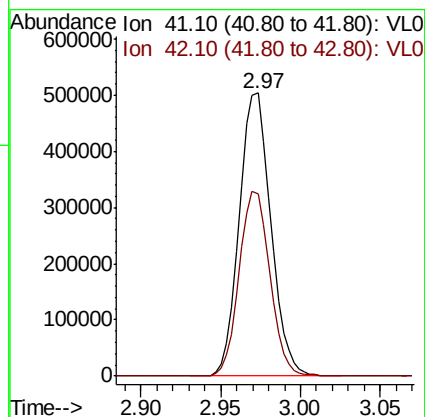
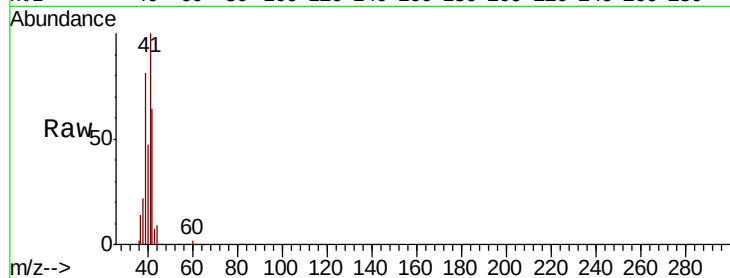
Ion Ratio Lower Upper

41 100

42 63.6 55.6 83.4

Manual Integrations  
APPROVED

MMDadoda  
3/9/2020 9:19:50 AM



#10

Heptane

Concen: 25.597 ppbv

RT: 8.15 min Scan# 1667

Delta R.T. -0.01 min

Lab File: VL034813.D

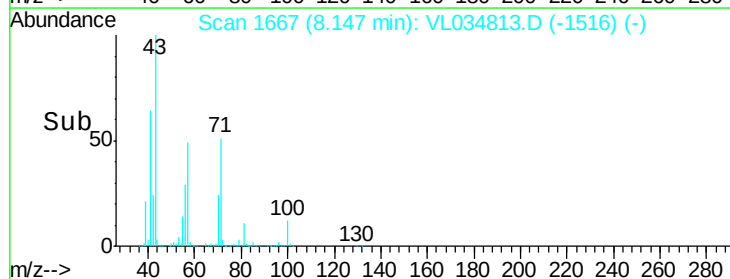
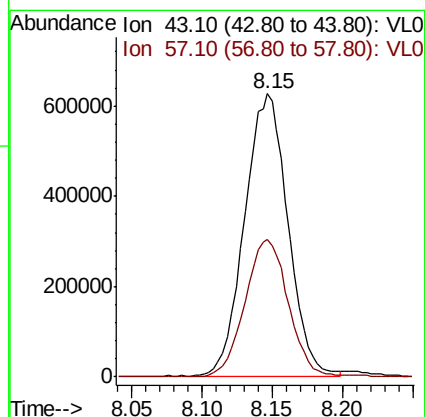
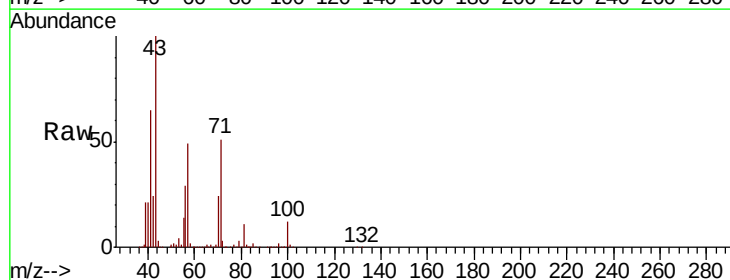
Acq: 6 Mar 2020 3:27

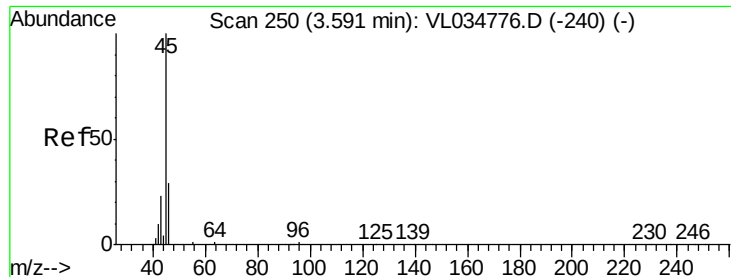
Tgt Ion: 43 Resp: 1337907

Ion Ratio Lower Upper

43 100

57 48.7 40.5 60.7





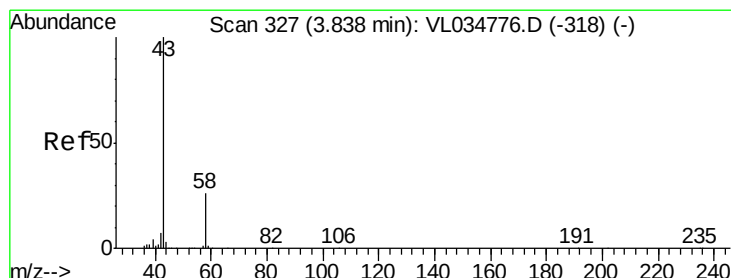
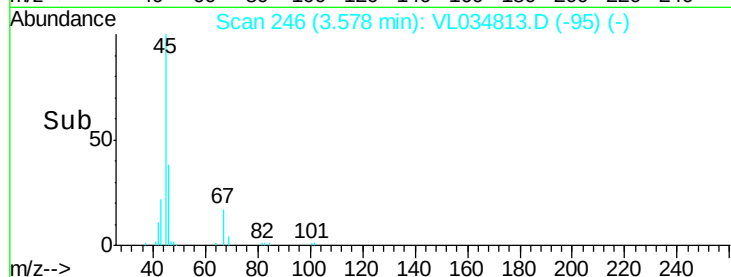
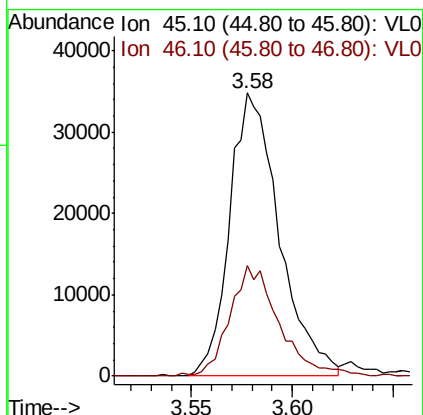
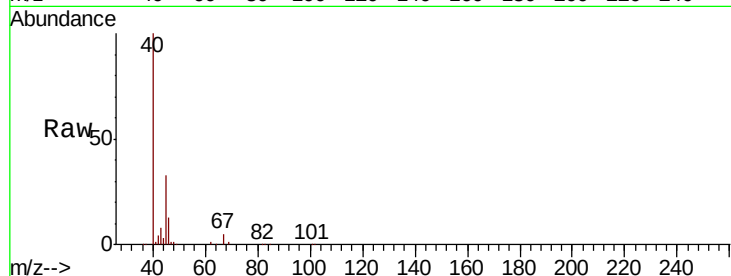
#13  
Ethanol  
Concen: 8.513 ppbv  
RT: 3.58 min Scan# 246  
Delta R.T. -0.01 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

Instrument :  
MSVOA\_L  
ClientSampleId :  
SS-2-4

Tot Ion: 45 Resp: 59989  
Ion Ratio Lower Upper  
45 100  
46 38.8 14.7 58.9

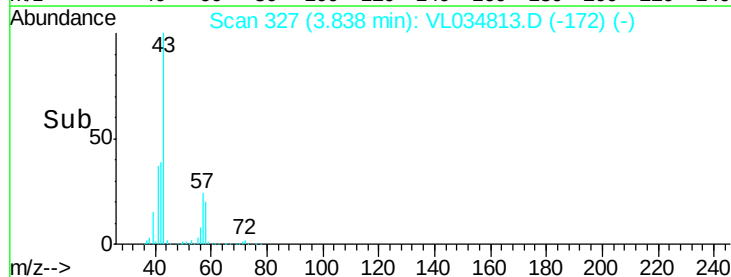
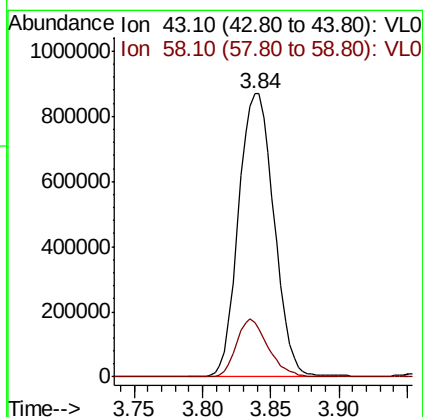
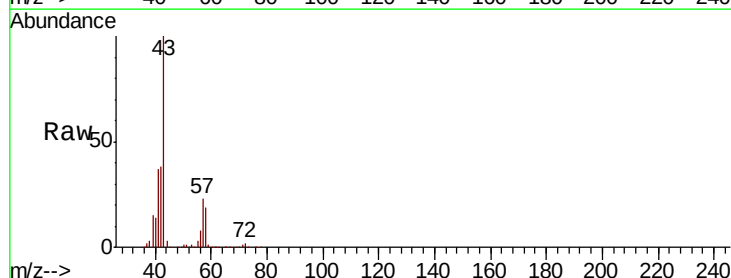
Manual Integrations  
APPROVED

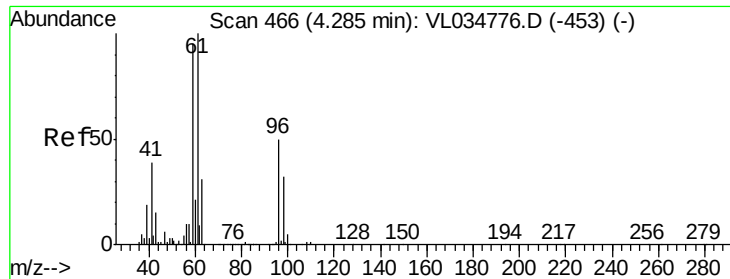
MMDadoda  
3/9/2020 9:19:50 AM



#15  
Acetone  
Concen: 28.590 ppbv  
RT: 3.84 min Scan# 327  
Delta R.T. -0.00 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

Tgt Ion: 43 Resp: 1570170  
Ion Ratio Lower Upper  
43 100  
58 18.5 21.0 31.6#





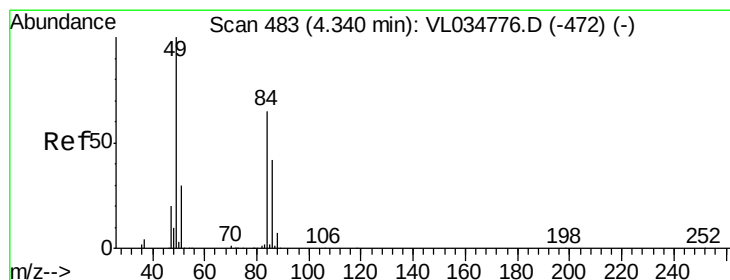
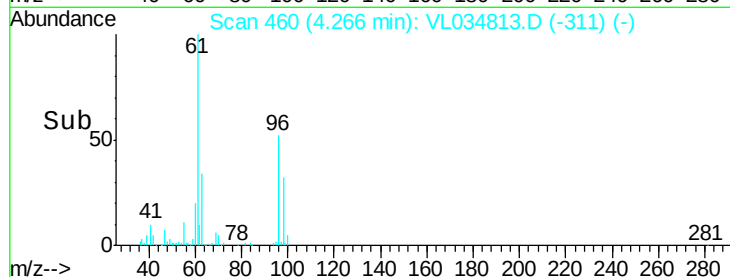
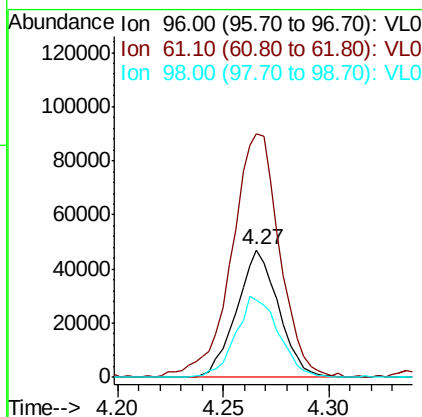
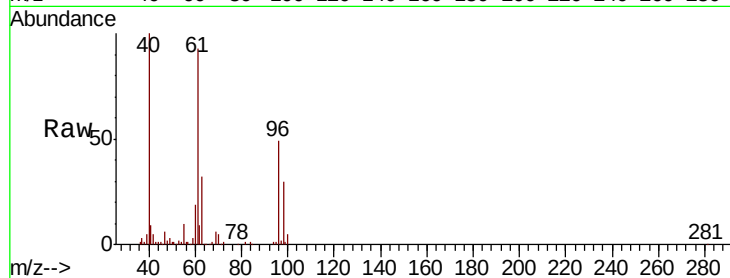
#18  
 1,1-Dichloroethene  
 Concen: 3.184 ppbv  
 RT: 4.27 min Scan# 460  
 Delta R.T. -0.02 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SS-2-4

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 96      | 100   |       |       |
| 61      | 188.1 | 159.5 | 239.3 |
| 98      | 60.3  | 51.1  | 76.7  |

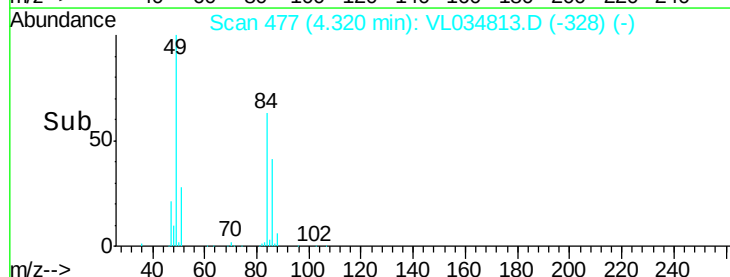
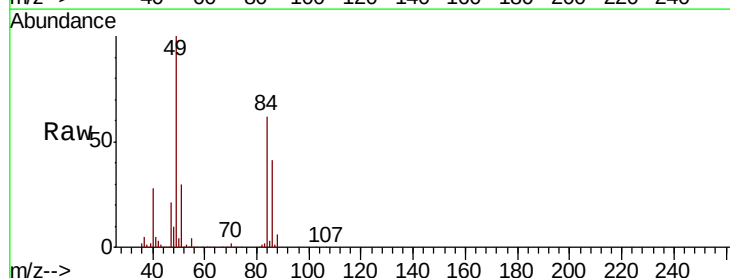
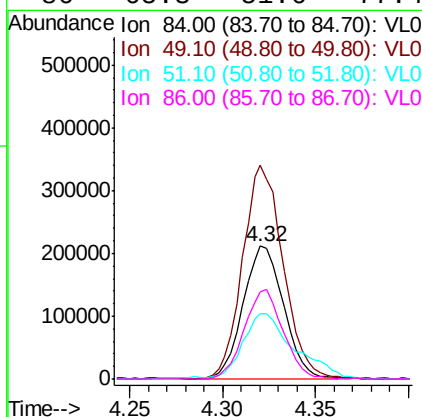
Manual Integrations  
 APPROVED

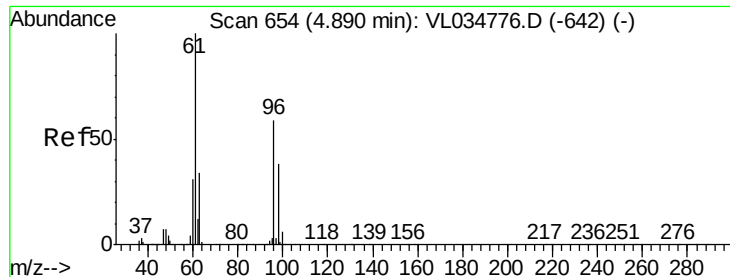
MMDadoda  
 3/9/2020 9:19:50 AM



#20  
 Methylene Chloride  
 Concen: 16.268 ppbv  
 RT: 4.32 min Scan# 477  
 Delta R.T. -0.02 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 84      | 100   |       |       |
| 49      | 160.7 | 123.2 | 184.8 |
| 51      | 47.8  | 37.4  | 56.2  |
| 86      | 65.3  | 51.6  | 77.4  |





#22

trans-1,2-Dichloroethene

Concen: 6.649 ppbv

RT: 4.87 min Scan# 649

Delta R.T. -0.02 min

Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

Instrument :

MSVOA\_L

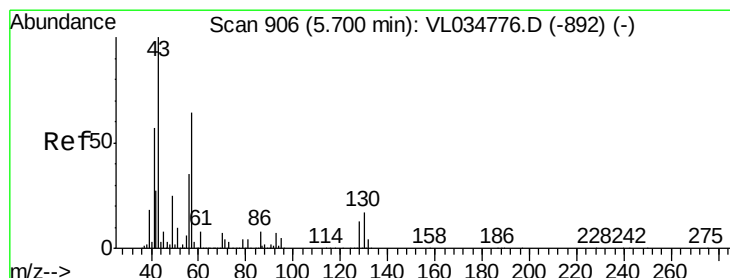
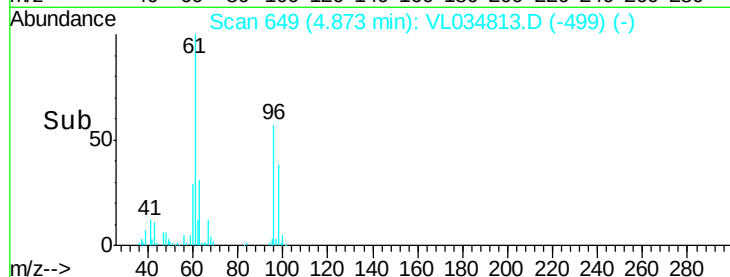
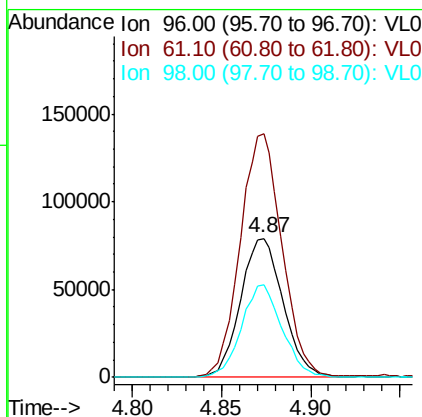
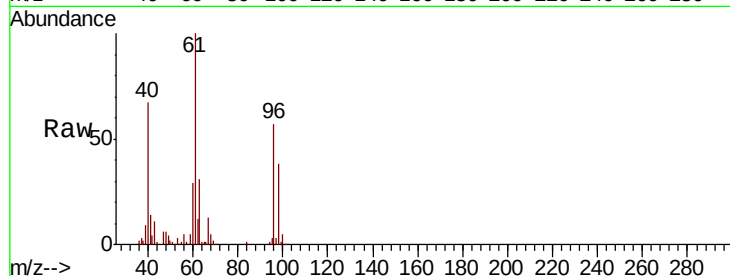
ClientSampleId :

SS-2-4

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 96    | Resp: | 132280 |
| Ion      | Ratio | Lower | Upper  |
| 96       | 100   |       |        |
| 61       | 174.9 | 135.2 | 202.8  |
| 98       | 66.9  | 50.8  | 76.2   |

Manual Integrations  
APPROVED

MMDadoda  
3/9/2020 9:19:50 AM



#26

Hexane

Concen: 44.763 ppbv

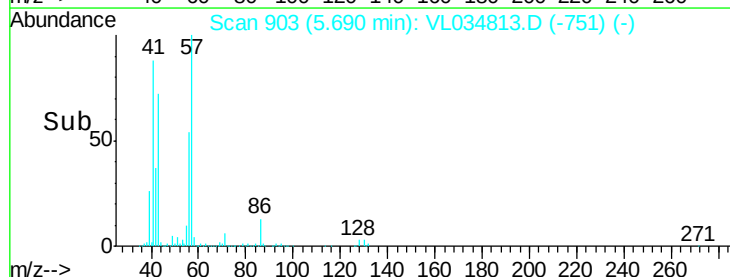
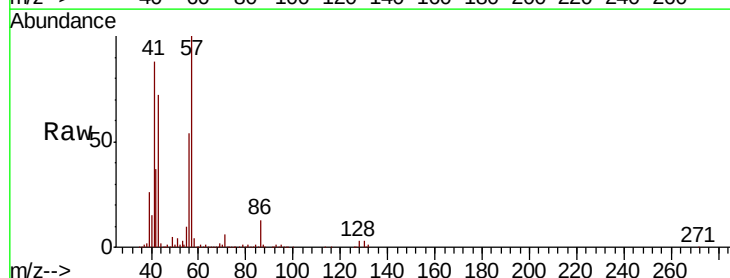
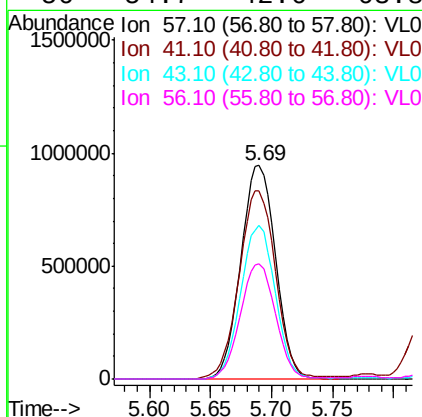
RT: 5.69 min Scan# 903

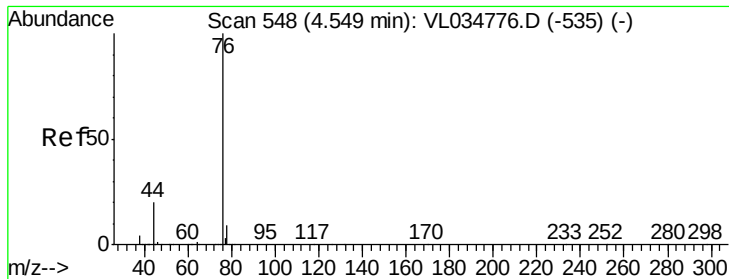
Delta R.T. -0.01 min

Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 57    | Resp: | 1855903 |
| Ion      | Ratio | Lower | Upper   |
| 57       | 100   |       |         |
| 41       | 92.9  | 72.0  | 108.0   |
| 43       | 71.2  | 179.1 | 268.7#  |
| 56       | 54.7  | 42.6  | 63.8    |





#27

Carbon Disulfide

Concen: 1.276 ppbv

RT: 4.53 min Scan# 542

Delta R.T. -0.02 min

Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

Instrument :

MSVOA\_L

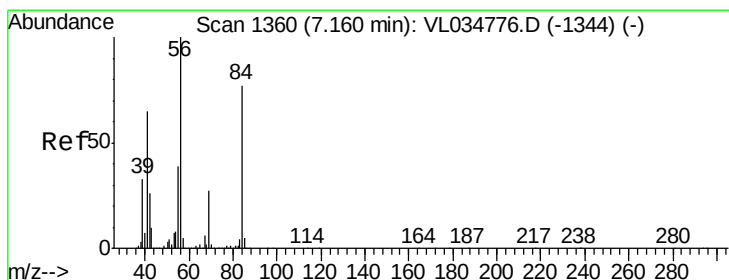
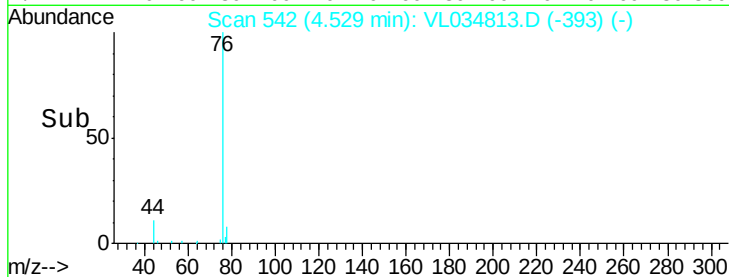
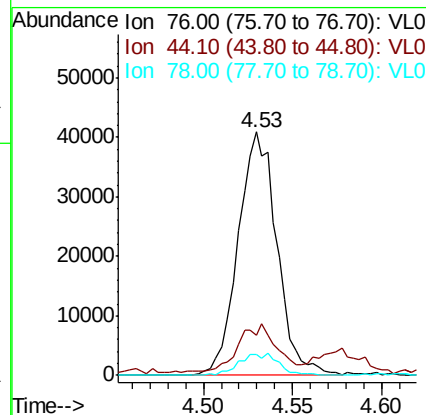
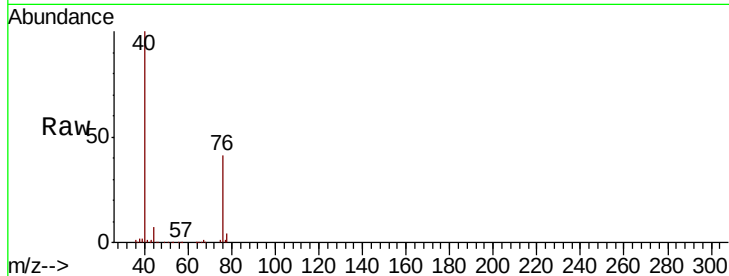
ClientSampled :

SS-2-4

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 76    | Resp: | 61812 |
| Ion Ratio | Lower | Upper |       |
| 76        | 100   |       |       |
| 44        | 20.9  | 16.1  | 24.1  |
| 78        | 9.2   | 7.5   | 11.3  |

Manual Integrations  
APPROVED

MMDadoda  
3/9/2020 9:19:50 AM



#30

Cyclohexane

Concen: 43.605 ppbv

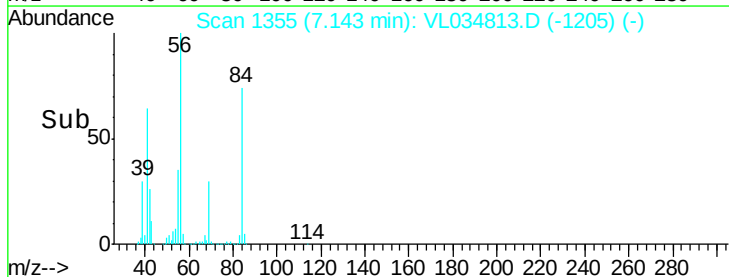
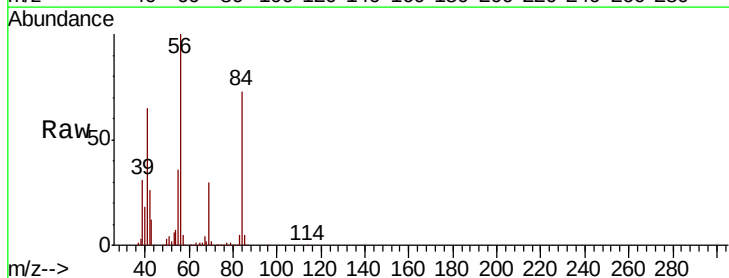
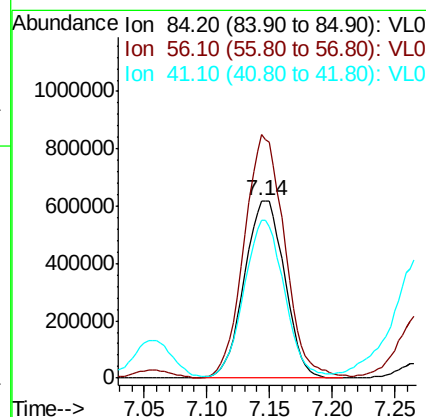
RT: 7.14 min Scan# 1355

Delta R.T. -0.02 min

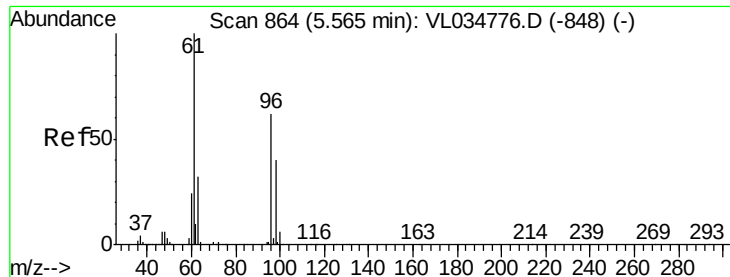
Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

|           |       |       |         |
|-----------|-------|-------|---------|
| Tgt Ion:  | 84    | Resp: | 1383135 |
| Ion Ratio | Lower | Upper |         |
| 84        | 100   |       |         |
| 56        | 137.3 | 113.2 | 169.8   |
| 41        | 86.9  | 70.2  | 105.4   |







#31

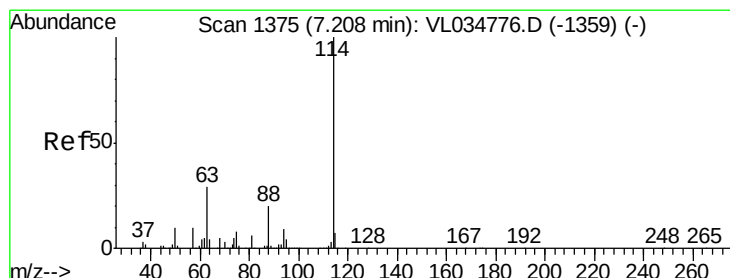
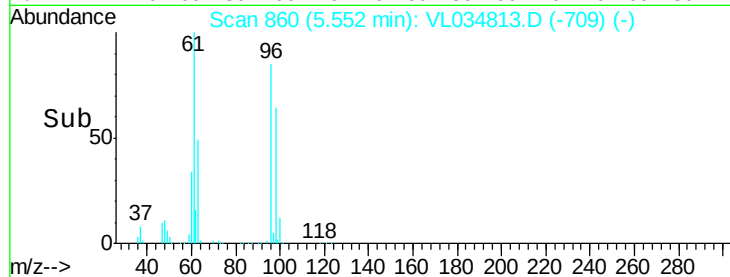
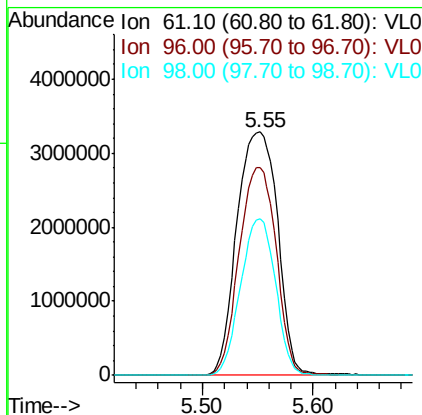
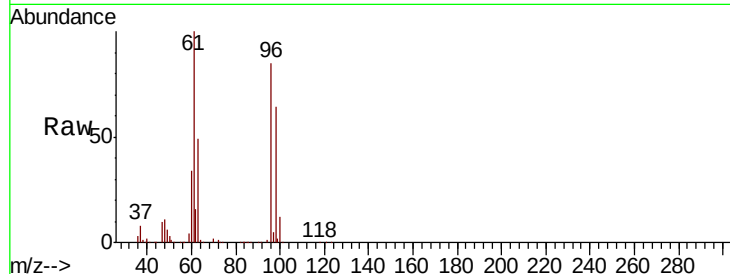
cis-1,2-Dichloroethene  
 Concen: 198.702 ppbv  
 RT: 5.55 min Scan# 860  
 Delta R.T. -0.01 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SS-2-4

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 85.3  | 49.7  | 74.5# |
| 98      | 64.4  | 31.9  | 47.9# |

Manual Integrations  
 APPROVED

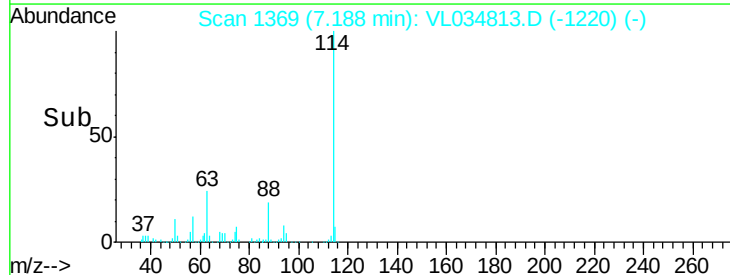
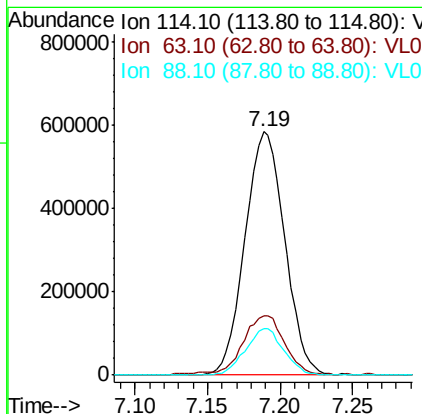
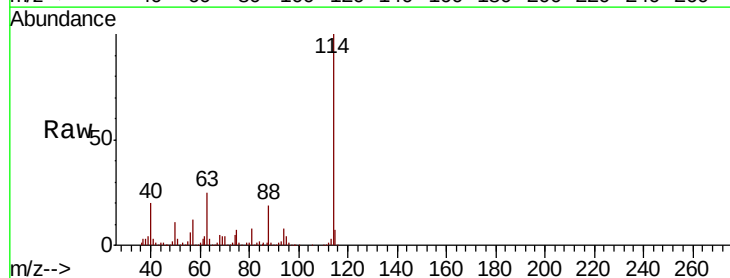
MMDadoda  
 3/9/2020 9:19:50 AM

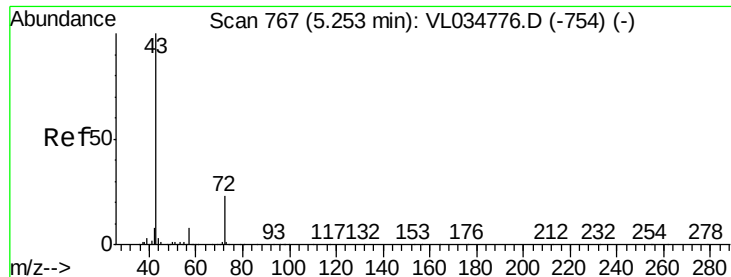


#33

1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.19 min Scan# 1369  
 Delta R.T. -0.02 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 26.4  | 23.6  | 35.4  |
| 88      | 18.3  | 15.8  | 23.8  |





#34

2-Butanone

Concen: 1.853 ppbv

RT: 5.25 min Scan# 766

Delta R.T. -0.00 min

Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

Instrument :

MSVOA\_L

ClientSampled :

SS-2-4

Tot Ion: 43 Resp: 134664

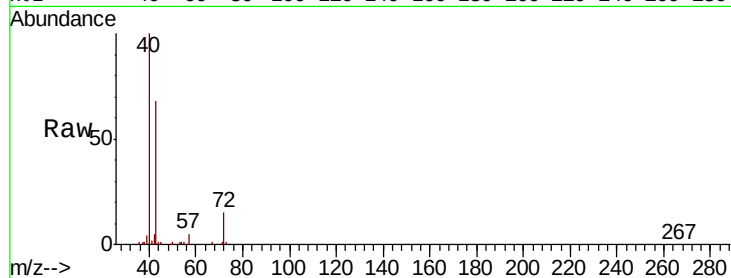
Ion Ratio Lower Upper

43 100

72 21.9 17.5 26.3

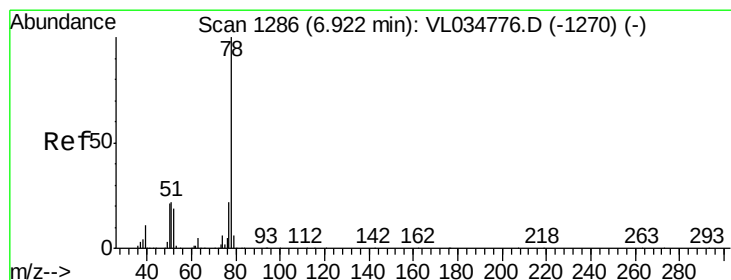
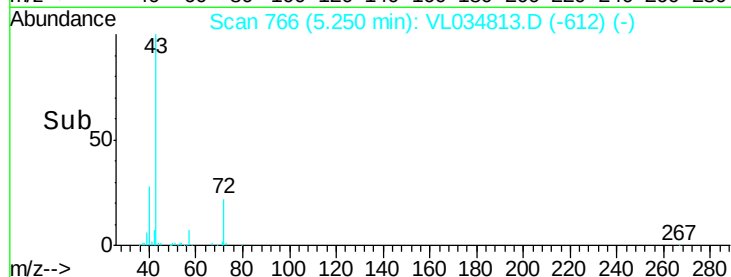
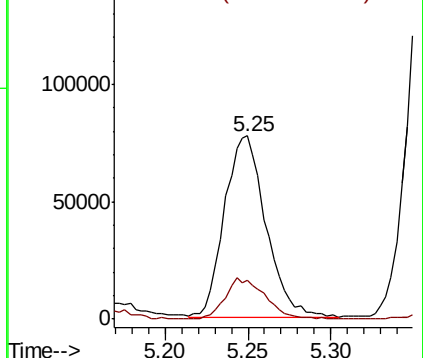
Manual Integrations  
APPROVED

MMDadoda  
3/9/2020 9:19:50 AM



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#36

Benzene

Concen: 16.993 ppbv

RT: 6.91 min Scan# 1281

Delta R.T. -0.02 min

Lab File: VL034813.D

Acq: 6 Mar 2020 3:27

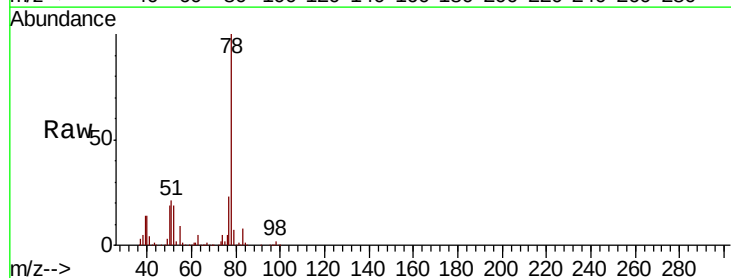
Tgt Ion: 78 Resp: 1622088

Ion Ratio Lower Upper

78 100

77 23.1 18.0 27.0

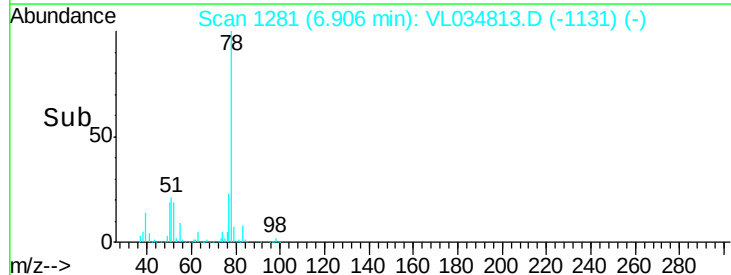
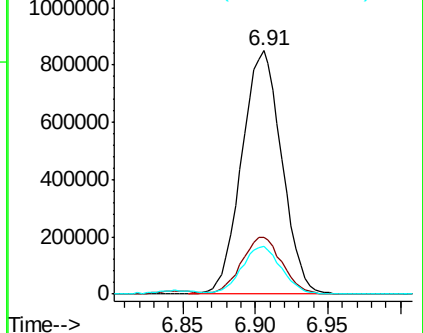
50 19.4 16.9 25.3

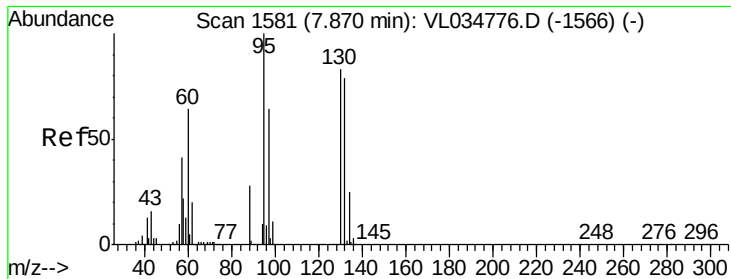


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





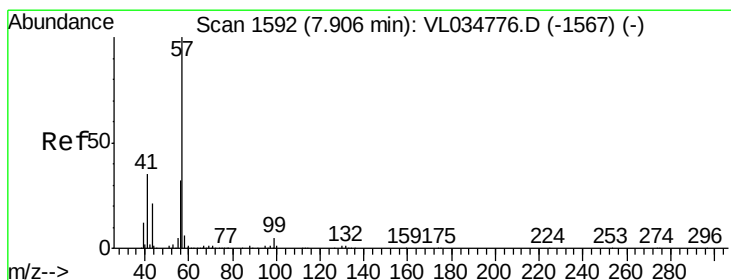
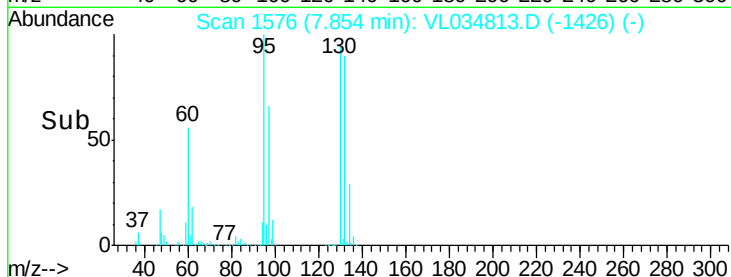
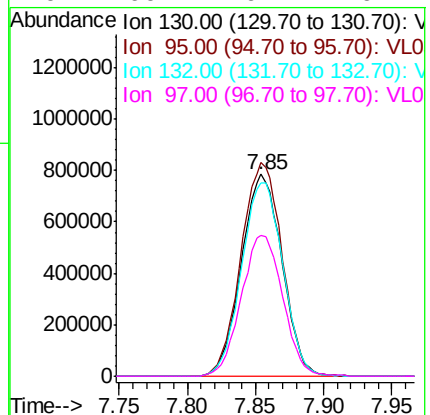
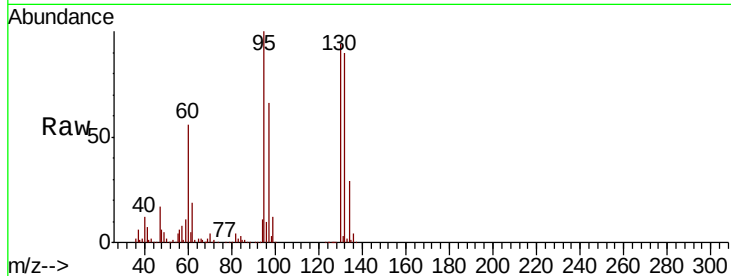
#38  
 Trichloroethene  
 Concen: 43.640 ppbv  
 RT: 7.85 min Scan# 1576  
 Delta R.T. -0.02 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SS-2-4

| Tot Ion | Ion   | Ratio | Lower | Upper |
|---------|-------|-------|-------|-------|
| 130     | 100   |       |       |       |
| 95      | 105.8 | 95.8  | 143.8 |       |
| 132     | 95.6  | 76.1  | 114.1 |       |
| 97      | 69.4  | 61.1  | 91.7  |       |

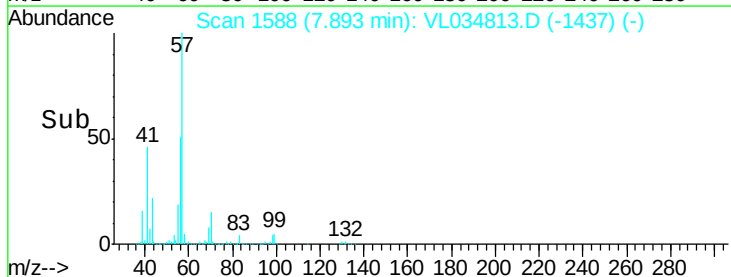
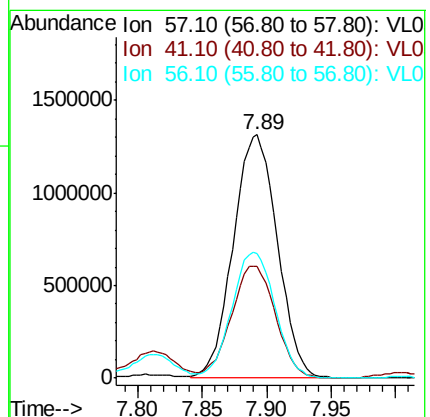
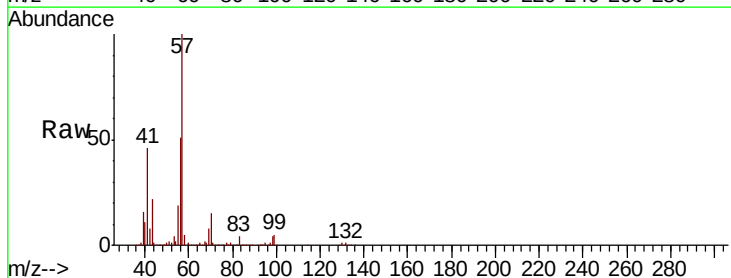
Manual Integrations  
 APPROVED

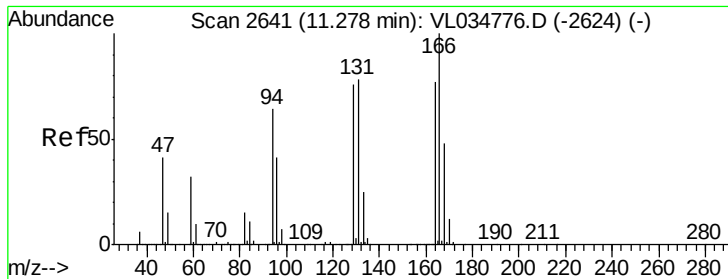
MMDadoda  
 3/9/2020 9:19:50 AM



#44  
 2,2,4-Trimethylpentane  
 Concen: 18.635 ppbv  
 RT: 7.89 min Scan# 1588  
 Delta R.T. -0.01 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

| Tgt Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 57      | 100  |       |       |       |
| 41      | 46.2 | 27.4  | 41.0# |       |
| 56      | 50.9 | 25.0  | 37.6# |       |





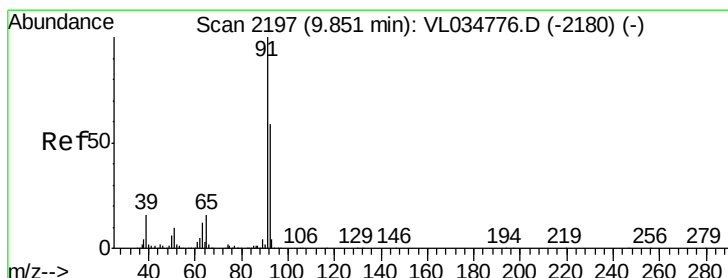
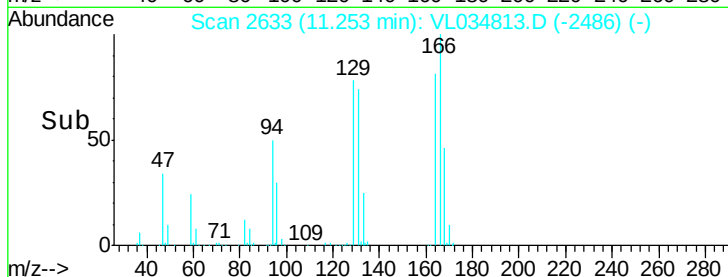
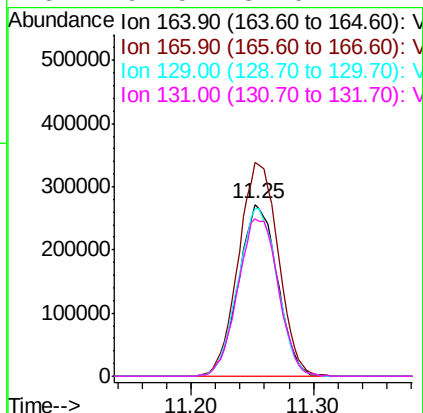
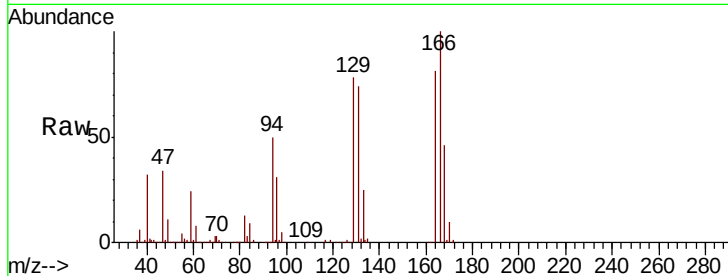
#52  
Tetrachloroethene  
Concen: 16.955 ppbv  
RT: 11.25 min Scan# 2633  
Delta R.T. -0.03 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

Instrument :  
MSVOA\_L  
ClientSampled :  
SS-2-4

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 166     | 124.1 | 103.3 | 154.9 |
| 129     | 97.1  | 79.0  | 118.4 |
| 131     | 91.5  | 81.0  | 121.4 |

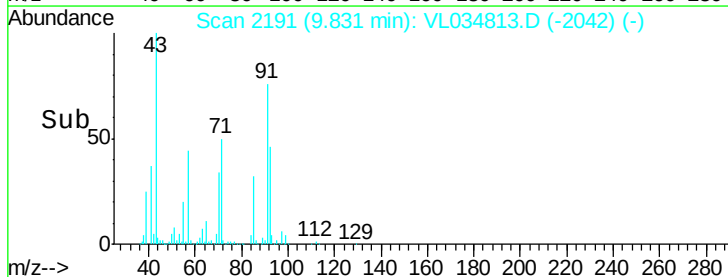
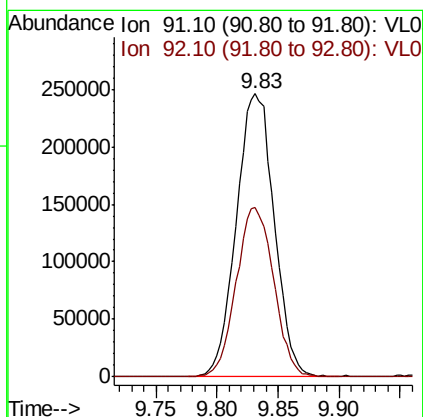
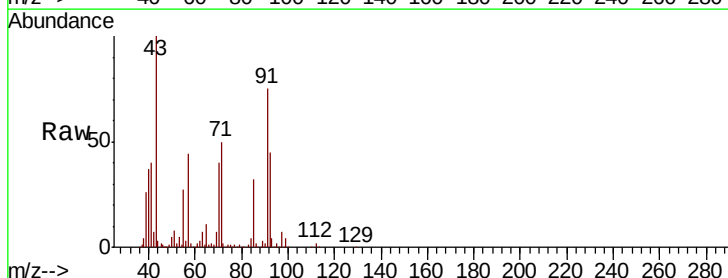
Manual Integrations  
APPROVED

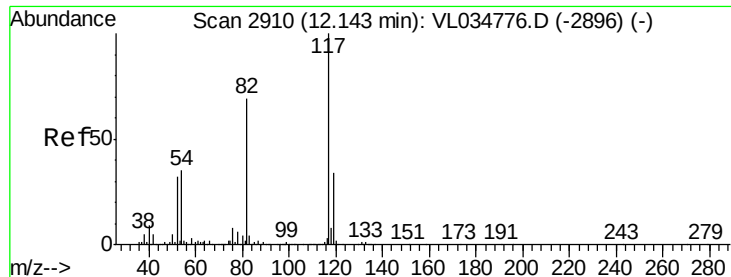
MMDadoda  
3/9/2020 9:19:50 AM



#53  
Toluene  
Concen: 5.216 ppbv  
RT: 9.83 min Scan# 2191  
Delta R.T. -0.02 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 59.3  | 48.2  | 72.2  |





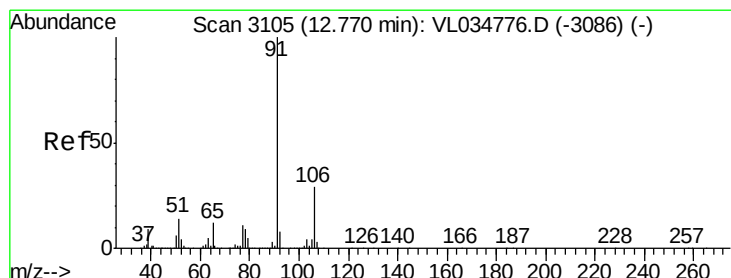
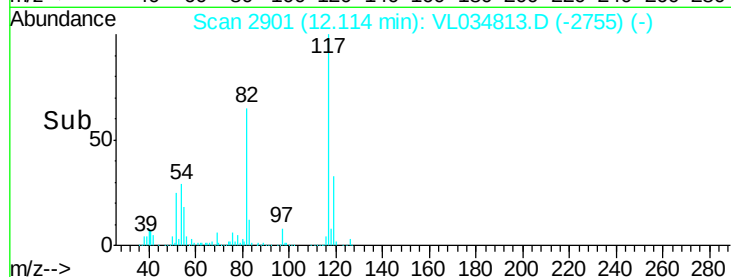
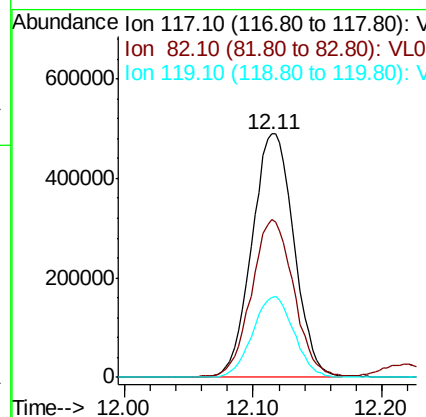
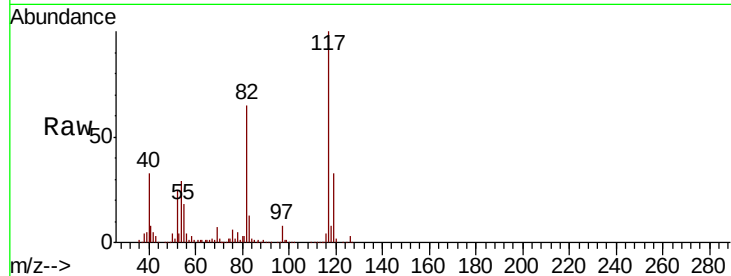
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.11 min Scan# 2901  
Delta R.T. -0.03 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

Instrument :  
MSVOA\_L  
ClientSampled :  
SS-2-4

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 65.4  | 53.9  | 80.9  |
| 119     | 32.7  | 25.0  | 37.4  |

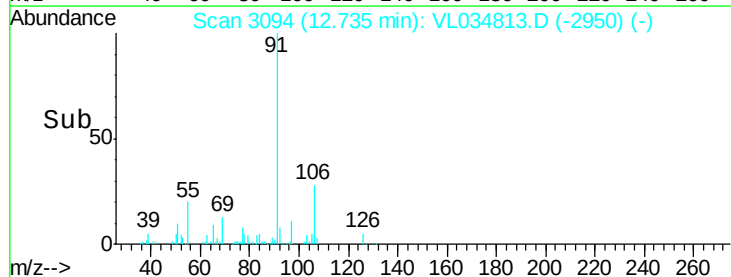
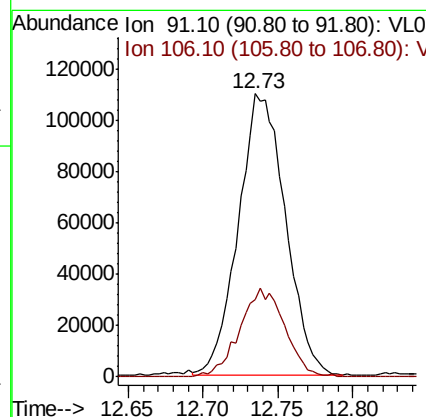
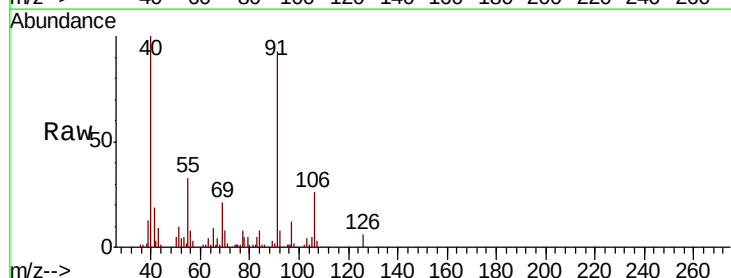
Manual Integrations  
APPROVED

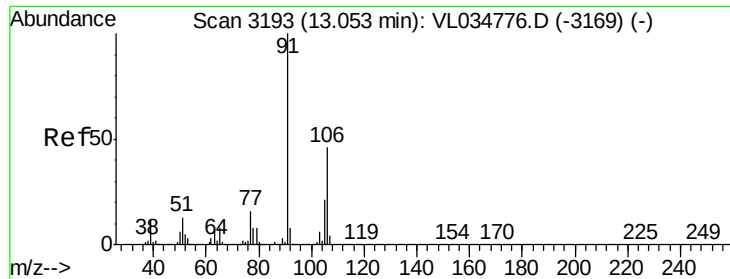
MMDadoda  
3/9/2020 9:19:50 AM



#58  
Ethyl Benzene  
Concen: 1.740 ppbv  
RT: 12.73 min Scan# 3094  
Delta R.T. -0.04 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 27.7  | 22.8  | 34.2  |





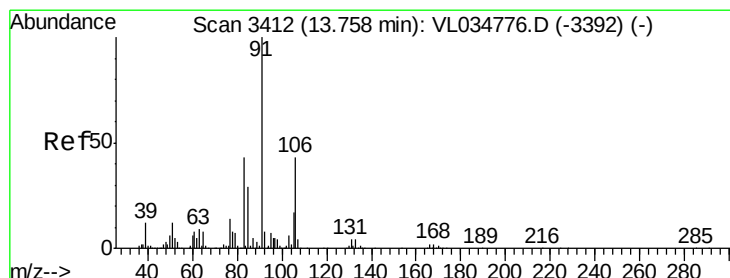
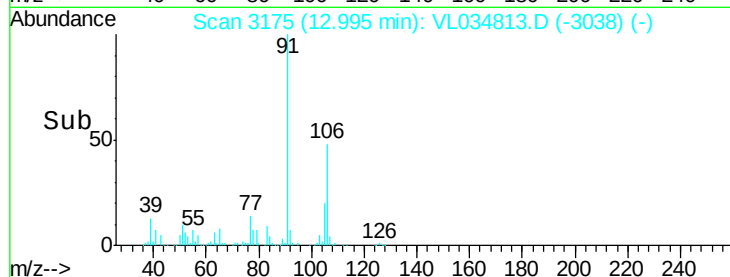
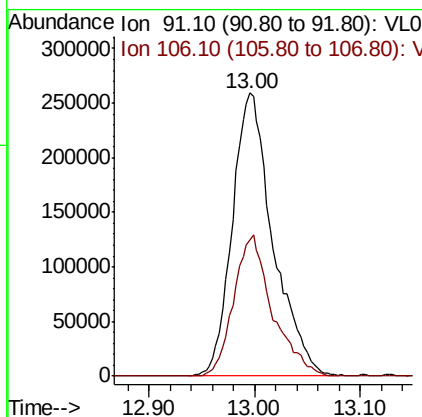
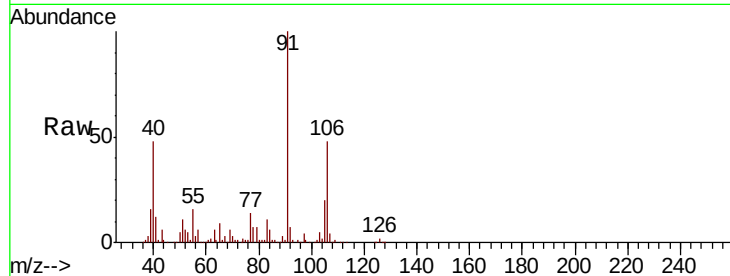
#59  
m/p-Xylene  
Concen: 5.814 ppbv  
RT: 13.00 min Scan# 3175  
Delta R.T. -0.06 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

Instrument :  
MSVOA\_L  
ClientSampled :  
SS-2-4

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 47.7  | 35.8  | 53.8  |

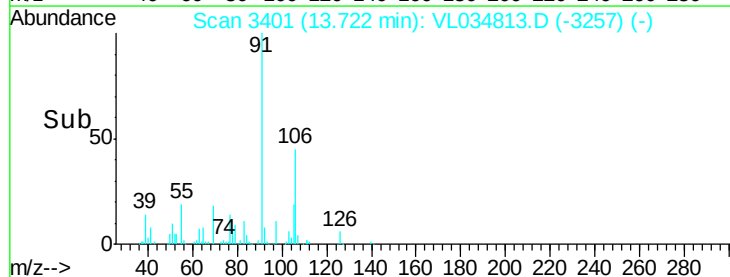
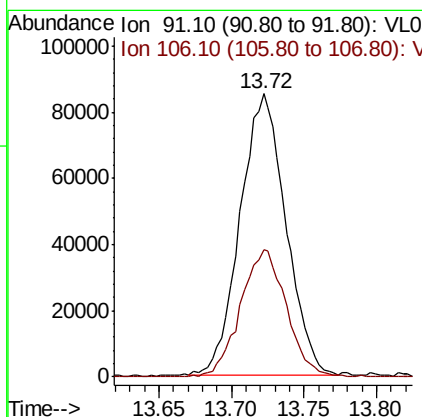
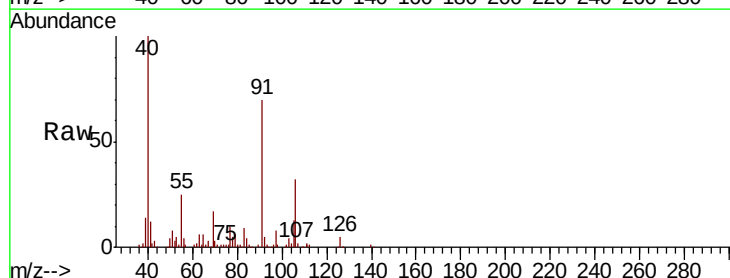
Manual Integrations  
APPROVED

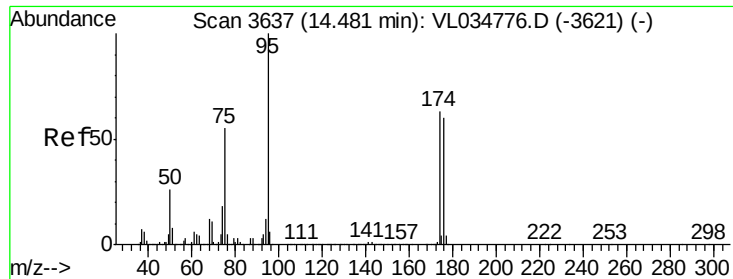
MMDadoda  
3/9/2020 9:19:50 AM



#60  
o-Xylene  
Concen: 1.559 ppbv  
RT: 13.72 min Scan# 3401  
Delta R.T. -0.04 min  
Lab File: VL034813.D  
Acq: 6 Mar 2020 3:27

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 45.1  | 21.7  | 65.1  |





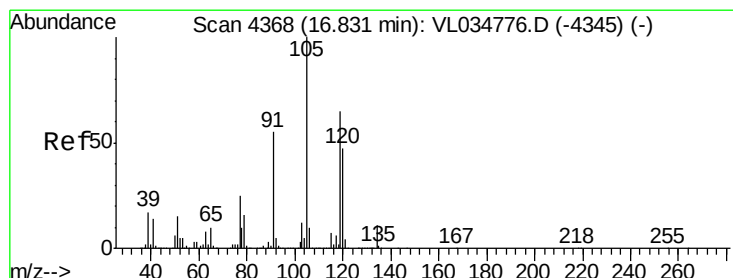
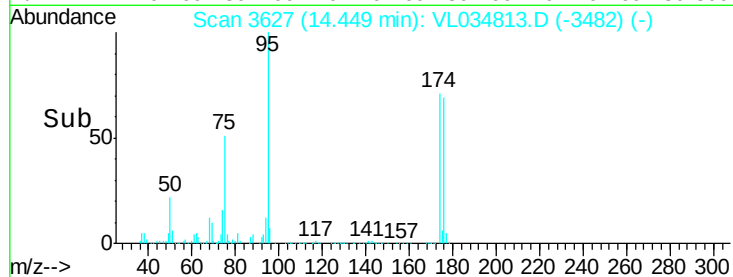
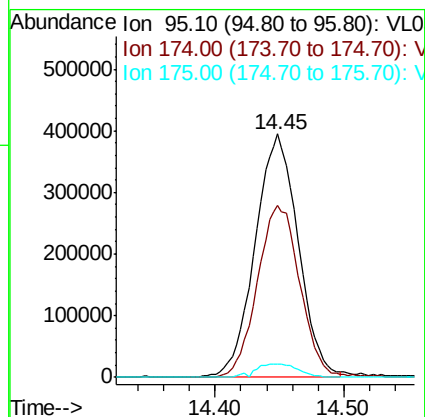
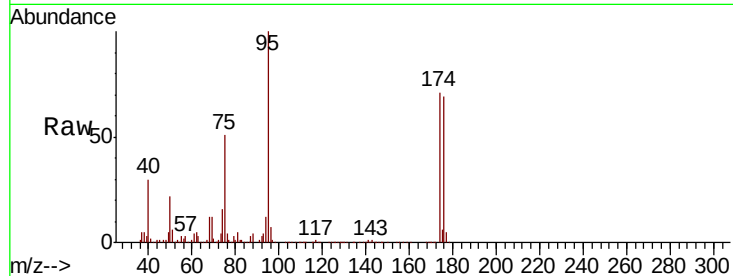
#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 9.858 ppbv  
 RT: 14.45 min Scan# 3627  
 Delta R.T. -0.03 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

Instrument :  
 MSVOA\_L  
 ClientSampled :  
 SS-2-4

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 70.7  | 50.6  | 76.0  |
| 175     | 5.6   | 3.8   | 5.6   |

Manual Integrations  
 APPROVED

MMDadoda  
 3/9/2020 9:19:50 AM



#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.272 ppbv m  
 RT: 16.79 min Scan# 4356  
 Delta R.T. -0.04 min  
 Lab File: VL034813.D  
 Acq: 6 Mar 2020 3:27

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 105     | 100   |       |       |
| 120     | 41.7  | 37.8  | 56.6  |
| 91      | 15.9  | 43.8  | 65.8# |
| 77      | 17.2  | 19.9  | 29.9# |

